

ABSTRACT OF THE DISCLOSURE

A method of estimating substrate temperature according to this invention includes the steps of: epitaxially growing a Si-containing layer (103) on a SiGe layer (102) formed on a substrate for temperature estimation (101) constituted of a Si substrate under a reaction control condition; finding a relationship between a rate of growth of the Si-containing layer and a substrate temperature of the substrate for temperature estimation; epitaxially growing a Si-containing layer on a substrate for device fabrication as a subject of substrate temperature estimation under a reaction control condition; and estimating a substrate temperature of the substrate for device fabrication based on the rate of growth of the latter Si-containing layer and the relationship between the rate of growth of the former Si-containing layer (103) and the substrate temperature of the substrate for temperature estimation.